## Subpart A—The Standard

### § 1203.1 Scope, general requirements, and effective date.

(a) *Scope.* The standard in this subpart describes test methods and defines minimum performance criteria for all bicycle helmets, as defined in § 1203.4(b).

(b) *General requirements.*

(1) *Projections.* All projections on bicycle helmets must meet the construction requirements of § 1203.5.

(2) *Labeling and instructions.* All bicycle helmets must have the labeling and instructions required by § 1203.6.

(3) *Performance tests.* All bicycle helmets must be capable of meeting the peripheral vision, positional stability, dynamic strength of retention system, and impact-attenuation tests described in §§ 1203.7 through 1203.17.

(4) *Units.* The values stated in International System of Units (''SI'') measurements are the standard. The inch-pound values stated in parentheses are for information only.

(c) *Effective date.* The standard shall become effective March 10, 1999 and shall apply to all bicycle helmets manufactured after that date. Bicycle helmets manufactured from March 17, 1995 through March 10, 1999, inclusive, are subject to the requirements of Subpart D, rather than this subpart A.

### § 1203.2 Purpose and basis.

The purpose and basis of this standard is to reduce the likelihood of serious injury and death to bicyclists resulting from impacts to the head, pursuant to 15 U.S.C. 6001–6006.

### § 1203.3 Referenced documents.

(a) The following documents are incorporated by reference in this standard.

(1) Draft ISO/DIS Standard 6220–1983—Headforms for Use in the Testing of Protective Helmets.[1]

(2) SAE Recommended Practice SAE J211 OCT88, Instrumentation for Impact Tests.

(b) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the standards may be obtained as follows. Copies of the draft ISO/DIS Standard 6220–1983 are available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036. Copies of the SAE Recommended Practice SAE J211 OCT88, Instrumentation for Impact Tests, are available from Society of Automotive Engineers, 400 Commonwealth Dr., Warrendale, PA 15096. Copies may be inspected at the Office of the Secretary, Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, Maryland 20814, or at the Office of the Federal Register, 800 N. Capitol Street NW, Room 700, Washington, DC.

### § 1203.4 Definitions.

(a) *Basic plane* means an anatomical plane that includes the auditory meatuses (the external ear openings) and the inferior orbital rims (the bottom edges of the eye sockets). The ISO headforms are marked with a plane corresponding to this basic plane (see Figures 1 and 2 of this part).

(b) *Bicycle helmet* means any headgear that either is marketed as, or implied through marketing or promotion to be, a device intended to provide protection from head injuries while riding a bicycle.[2]

[1] Although the draft ISO/DIS 6220–1983 standard was never adopted as an international standard, it has become a consensus national standard because all recent major voluntary standards used in the United States for testing bicycle helmets establish their headform dimensions by referring to the draft ISO standard.

[2] Helmets specifically marketed for exclusive use in a designated activity, such as skateboarding, rollerblading, baseball, roller hockey, etc., would be excluded from this definition because the specific focus of their marketing makes it unlikely that such helmets would be purchased for other than their stated use. However, a multi-purpose helmet—one marketed or represented as providing protection either during general use or in a variety of specific activities other than bicycling—would fall within the definition of bicycle helmet if a reasonable consumer could conclude, based on the helmet's marketing or representations, that bicycling is among the activities in which the helmet is intended to be used. In making this determination, the Commission will consider the types of specific activities, if any, for which the helmet is marketed, the similarity of the

(c) *Comfort or fit padding* means resilient lining material used to configure the helmet for a range of different head sizes.

(d) *Coronal plane* is an anatomical plane perpendicular to both the basic and midsagittal planes and containing the midpoint of a line connecting the right and left auditory meatuses. The ISO headforms are marked with a transverse plane corresponding to this coronal plane (see Figures 1 and 2 of this part).

(e) *Field of vision* is the angle of peripheral vision allowed by the helmet when positioned on the reference headform.

(f) *Helmet positioning index (''HPI'')* is the vertical distance from the brow of the helmet to the reference plane, when placed on a reference headform. This vertical distance shall be specified by the manufacturer for each size of each model of the manufacturer's helmets, for the appropriate size of headform for each helmet, as described in § 1203.10.

(g) *Midsagittal plane* is an anatomical plane perpendicular to the basic plane and containing the midpoint of the line connecting the notches of the right and left inferior orbital ridges and the midpoint of the line connecting the superior rims of the right and left auditory meatuses. The ISO headforms are marked with a longitudinal plane corresponding to the midsagittal plane (see Figures 1 and 2 of this part).

(h) *Modular elastomer programmer (''MEP'')* is a cylindrical pad, typically consisting of a polyurethane rubber, used as a consistent impact medium for the systems check procedure. The MEP shall be 152 mm (6 in) in diameter, and 25 mm (1 in) thick and shall have a durometer of 60±2 Shore A. The MEP shall be affixed to the top surface of a flat 6.35 mm (¼in) thick aluminum plate. See § 1203.17(b)(1).

(i) *Preload ballast* is a ''bean bag'' filled with lead shot that is placed on the helmet to secure its position on the headform. The mass of the preload ballast is 5 kg (11 lb).

(j) *Projection* is any part of the helmet, internal or external, that extends beyond the faired surface.

(k) *Reference headform* is a headform used as a measuring device and contoured in the same configuration as one of the test headforms A, E, J, M, and O defined in draft ISO DIS 6220–1983. The reference headform shall include surface markings corresponding to the basic, coronal, midsagittal, and reference planes (see Figures 1 and 2 of this part).

(l) *Reference plane* is a plane marked on the ISO headforms at a specified distance above and parallel to the basic plane (see Figure 3 of this part).

(m) *Retention system* is the complete assembly that secures the helmet in a stable position on the wearer's head.

(n) *Shield* means optional equipment for helmets that is used in place of goggles to protect the eyes.

(o) *Spherical impactor* is an impact fixture used in the instrument system check of § 1203.17(b)(1) to test the impact-attenuation test equipment for precision and accuracy. The spherical impactor shall be a 146 mm (5.75 in) diameter aluminum sphere mounted on the ball-arm connector of the drop assembly. The total mass of the spherical-impactor drop assembly shall be 5.0±0.1 kg (11.0±0.22 lb).

(p) *Test headform* is a solid model in the shape of a human head of sizes A, E, J, M, and O as defined in draft ISO/DIS 6220–1983. Headforms used for the impact-attenuation test shall be constructed of low-resonance K–1A magnesium alloy. The test headforms shall include surface markings corresponding to the basic, coronal, midsagittal, and reference planes (see Figure 2 of this part).

(q) *Test region* is the area of the helmet, on and above a specified impact test line, that is subject to impact testing.

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appearance, design, and construction of the helmet to other helmets marketed or recognized as bicycle helmets, and the presence, prominence, and clarity of any warnings, on the helmet or its packaging or promotional materials, against the use of the helmet as a bicycle helmet. A multi-purpose helmet marketed without specific reference to the activities in which the helmet is to be used will be presumed to be a bicycle helmet. The presence of warnings or disclaimers advising against the use of a multi-purpose helmet during bicycling is a relevant, but not necessarily controlling, factor in the determination of whether a multi-purpose helmet is a bicycle helmet.